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Three Cymotoid Isopods Collected from the Sea off the Bonin Islands

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トビウオ類に寄生するウオノエ科等脚類3種

布村　昇
富山市科学文化センター

小笠原諸島近辺の太平洋水域で東京都小笠原水産センターの加藤賢司氏によって捕獲されたトビウオ類の中の2種，ツマリトビウオとヒメアカトビウオに寄生する3種のウオノエ科について記載した。ツマリトビウオについては口腔に寄生する1種と鰓に寄生する *Mothocya* 1種の計2種があり，また，ヒメアカトビウオ寄生の口腔にも1種 *Glossobius* 属の1種が寄生していた。これらのうち2種はそれぞれ，新種，*Mothocya katoi* 及び，*Glossobius ogasawarensis* として記載され，いずれも模式標本は富山市科学文化センターで保管される。

Recently, Mr. Kenji Kato of Ogasawara Fisheries Center found some cymothoid specimens on the the gills and mouthes of flying fish, *Parexocoetus brachypterus brachypterus* (Richardson) taken from the sea off Bonin Islands. Succeedingly another cymothoid was found from another flying fish, *Cypselurus angusticeps* by him. These samples were sent to me for identification. At closer examination of mine, they proved to include two new species.

Before going further, I would like to express my sincere gratitude to Mr. Kenji Kato, of Ogasawara Fisheries Center.

This work was partly supported by a Grant-in-Aid from the Research Institute of Marine Invertebrates.

***Mothocya melanosticta* (Schioedte and Meinert, 1884)**

Fig.1 and 2

Irona melanosticata Schioedete and Meinert, 1844.
Irona cypeseluorulsa Avdeev, 1978.
Mothocya melanosticta (Schioedte and Meinert,1884); Bruce, 1986.

Material examiened: 3 ♀♀ (15.0～17.5 mm in body length) and 3♂♂(9.0～9.3mm in body length), all from the mouth of *Parexocoetus brachypterus* taken from thr sea off Bonin Islands.

Contributions from the Toyama Science Museum, No.116

Description of female: Body moderately twisted to one side, 1.9 times as long as wide. Colour white in alcohol, densely covered by chromatophores, including pereopods and pleopods. Cephalon rostrum protruded but truncated. Body widest at pereonites 5 and 6. Rostrum weakly produced. Each eye composed of about 60 ommatidea. Coxae of pereonites remarkable. Pleonites all visible. Pleotelson with indistinct longitudinal edges; pleonal segments abruptly narrower than the pereonites.

First antennae(Fig.1 B) 8-segmented. Second antenna (Fig.1C) 8-segmented.

Mandible(Fig.1D)scarecely extending beyond incisor. First maxilla long with 4 teeth at the tip. Second maxilla stout with 7～8 teeth at the tip. Maxilliped; third segment with recurved spines.

Pereopods (Figs. 1 H and I); basis stout; ischium rectangular; merus and carpus rather

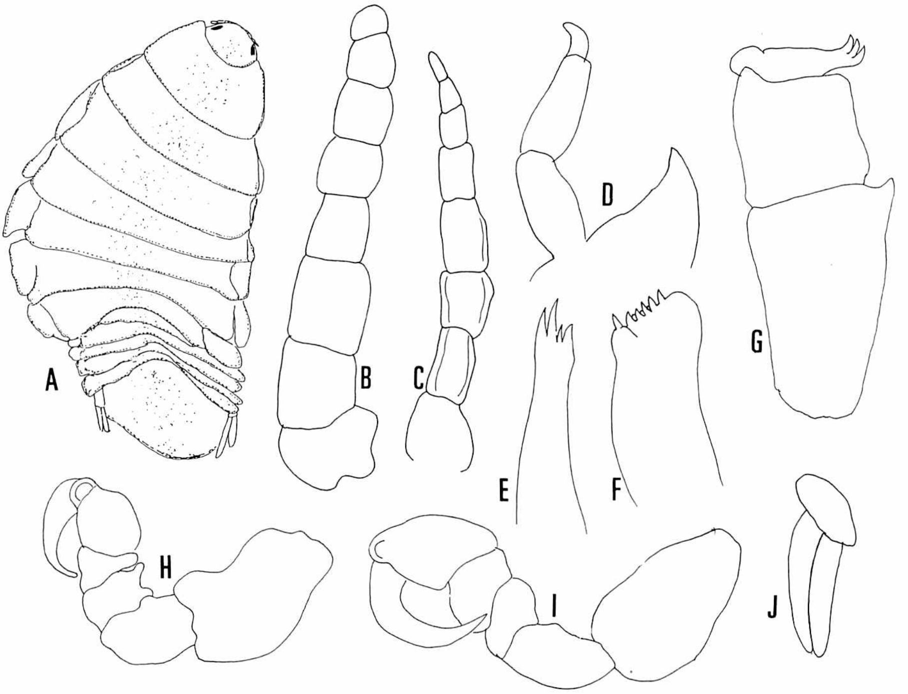

Fig.1. *Mothocya melanostcta* (Schioedte and Meinert,1884)
A. Dorsal view; B.First antenna; C.Second antenna; D.Mandible; E.First maxilla; F.Second maxilla; G.Maxilliped; H. First pereopod;I.Sixth pereopod;J.Uropod (All: female).

short; propodus stout and rather short; propouds long and recurved.

Pleopods are not characteristic in female.

Uropod(Fig. 1J); basis elliptical; both rami lanceolate and subequal in length.

Description of male: Body convex and moderately not twisted, 2.6 times longer than wide. Color white in alcohol, partly covered by chromatophores, including pereopods and pleopods. Rostrum of cephalon protruded but truncated. Body widest at pereonites 2 and 3. Eyes elliptical, each eye composed of about 60 ommatidea. Coxae of each pereonite about 3 times as long as wide. Pleonite all visible from dorsal view. Lateral margin usually narrow,

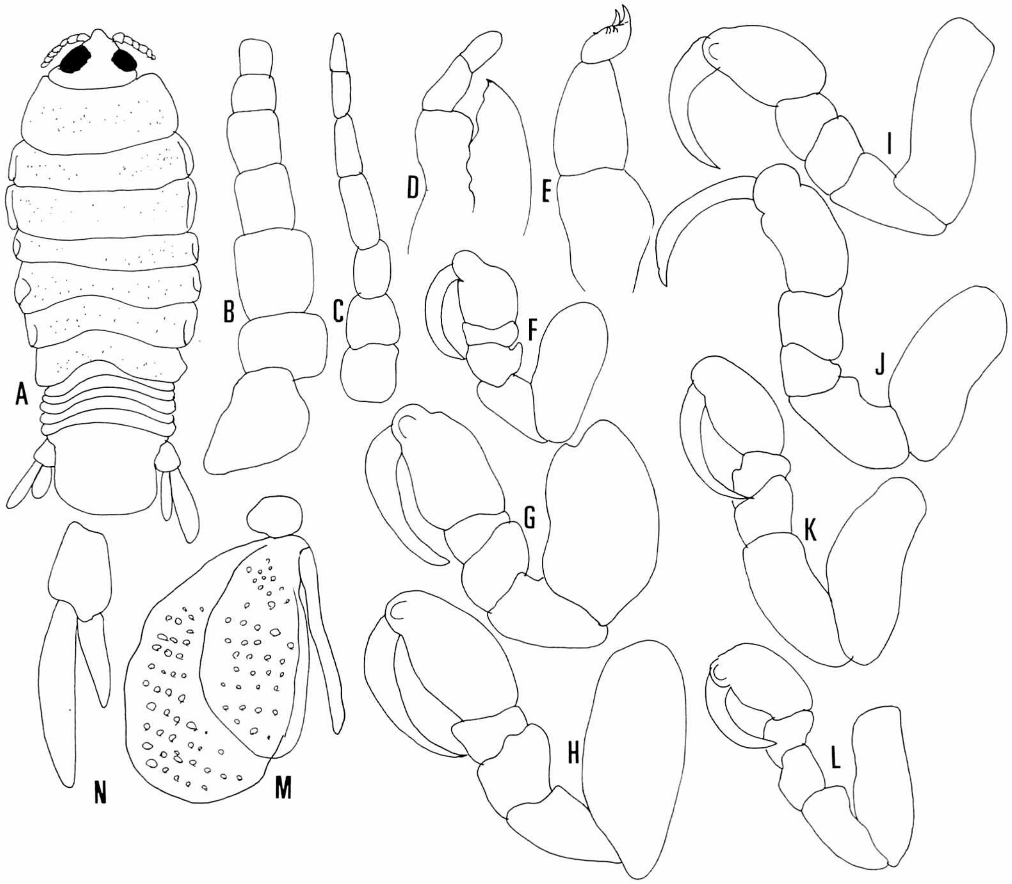

Fig.2. *Mothocya melanostcta* (Schioedte and Meinert,1884)
A.Dorsal view; B.First antenna; C.Second antenna; D.Mandible; E.Maxiliped; F-L.Pereopods 1-7; M.Second pleopod; N.Uropod (All: Male).

especially on concave both side; only coxae of pereoponite 7. Pleotelson with indistinct longitudinal edges; pleonal segments abruptly narrower than the pereonites.

First antenna (Fig.2B) 7-segmented. Second antenna (Fig.2C) 7-segmented. Mandible(Fig.2D); palp 3-segmented and insicor acute. First maxilla long with 4 teeth at the tip. Maxilliped (Fig. 2E) 3-segmented; second segment stout with 2 recurved teeth; and third segment small with recurved spines.

Pereopod 4 to 7 and robuster and longer than 1 to 3; especially basis stout.

Male second pleopod(Fig. 2M); basis small: exopod round and big; endopod ovate-lanceolate but only 3/4 length of exopod; stylus straight and not exceedingly beyond endopod. Uropod (Fig.2N); rami relatively long, extending well beyond posterior margin of pleotelson.

Remarks: As Bruce pointed out, the species name *Mothocya melanosticta* Schioedte and Meinert has been the most widely applied to many species for the name of the genus. These specimens agree with the original description but has the following differnces from the original description:(1) more numerous setae on the second antenna (2)less numerous teeth at the tip of maxilliped, and (3) more strongly twisted body shape of female.

Mothocya katoi **n. sp.**

(Japanese name: Tobiuo-yadorimushi, new)

Fig.3 and 4

Material examiened: 4♀♀(1 ovig. ♀ holotype, 22.2 mm in body length and 3♀♀ paratypes, 17.5~22.2 mm in body length)and 3 ♂♂(1♂ allotype, 5.2 mm in body length and 2 ♂♂, 4.8~6.0 mm in body length) from the mouthes of exocoetid fish, *Parexocoetus brachypterus brachypterus* (Richardson), taken from Bonin Island. coll. Kenji Kato, Nov.12, 1990. Type seires is deposited as follows: holotype(TOYA Cr-11181), allotype(TOYA Cr-11182)and 2 paratypes(TOYA Cr-11183~11184)at the the Toyama Science Museum and a paratype (OMNH Ar-3843) at the Osaka Museum of Natural History.

Description of female: Body convex and moderately twisted to one side, 2.4 times longer than wide; body widest at pereonite 4. Rostrum weakly produced. Eyes modiocre in size, each eye composed of about 60 ommatidea. Coxae narrow, especially on concave side, lateral margin usually concave; only coxae of pereonite 7. Pleotelson with indistinct longitudinal edges. Colour white in alcohol, densely covered by chromatophores, including pereopods and pleopods.

First antenna (Fig. 3B) 7-segmented. Second antenna (Fig. 3C)7- segmented.

Mandible(Fig.3D); palp 3-segmented; first segment club-shaped; second segment rectangular; terminal segment elliptical; pars incisiva acute.

First maxilla (Fig. 3E) slender, with 4 teeth at the tip.

Second maxilla (Fig. 3F) robust, with 5~7 recurved stout spines at the tip.

Maxilliped (Fig. 3G) 3-segmented, with 2-spines at the tip.

Pereopods 4 to 7 roubster and longer than pereopods 1 to 3; basis stout; ischium; merus

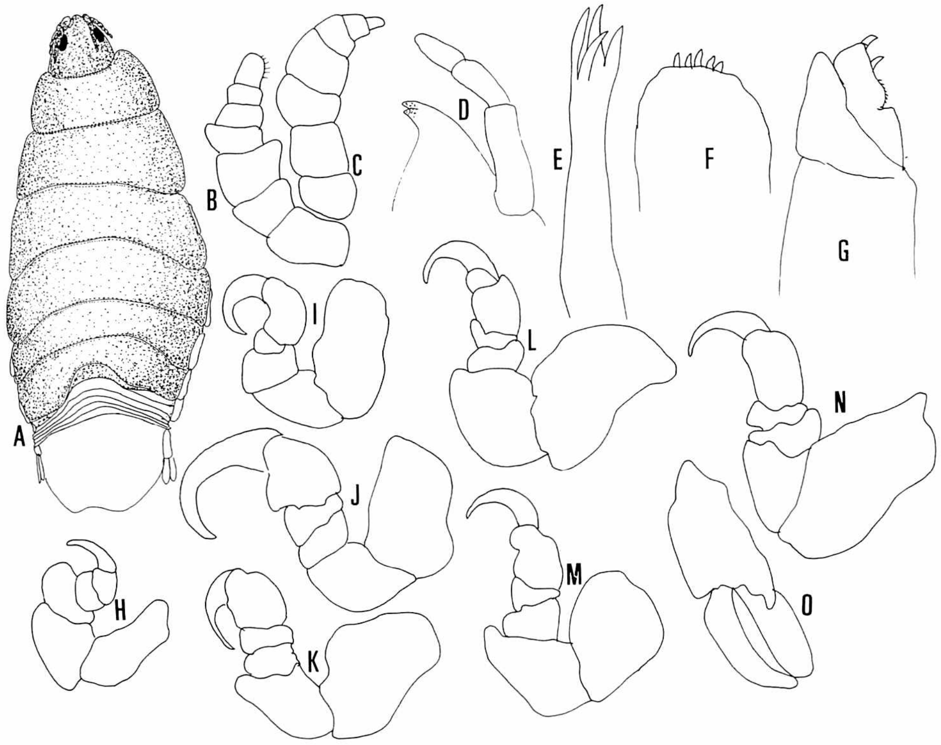

Fig.3. *Mothocya katoi* n. sp.
A. Dorsal view; B.First antenna; C.Second antenna; D.Mandible; E.First maxilla; F. Second maxilla; G.Maxilliped; H-N. Pereopods1-7. O.Uropod.(All: Holotype female)

triangular; carpus short; propodus rather robust; propodus big and recurved.

Uropod (Fig. 3 O); basis pentagonal; both rami elliptical.

Description of male: Body lanceolate and convex, 2.4 times longer than wide; body widest at pereonites 3∼5. Rostrum moderately protruded and truncated. Eyes 1/4 times as wide as cephalon. Each eye composed of about 60 ommatidea. Coxae of pereonites 2∼5 prominent. Pleotelson rectangular. Colour white in alcohol, densely covered by chromotophores, including pereopods and pleopods.

First antenna(Fig. 4D) 7-segmented. Second antenna (Fig. 4C) 6-segmented.

Mandible (Fig.4D);palp 3-segmented extending beyond incisor; first and second segment rectanuglar; terminal segment elliptical; pars incisiva acute.

First maxilla (Fig. 4D) slender, with 4 teeth at the tip.

Second maxilla(Fig. 4F) robust, with 7 recurved stout spines at the tip.

Maxilliped (Fig. 4G) with 2 spines on the terminal palpal segment.

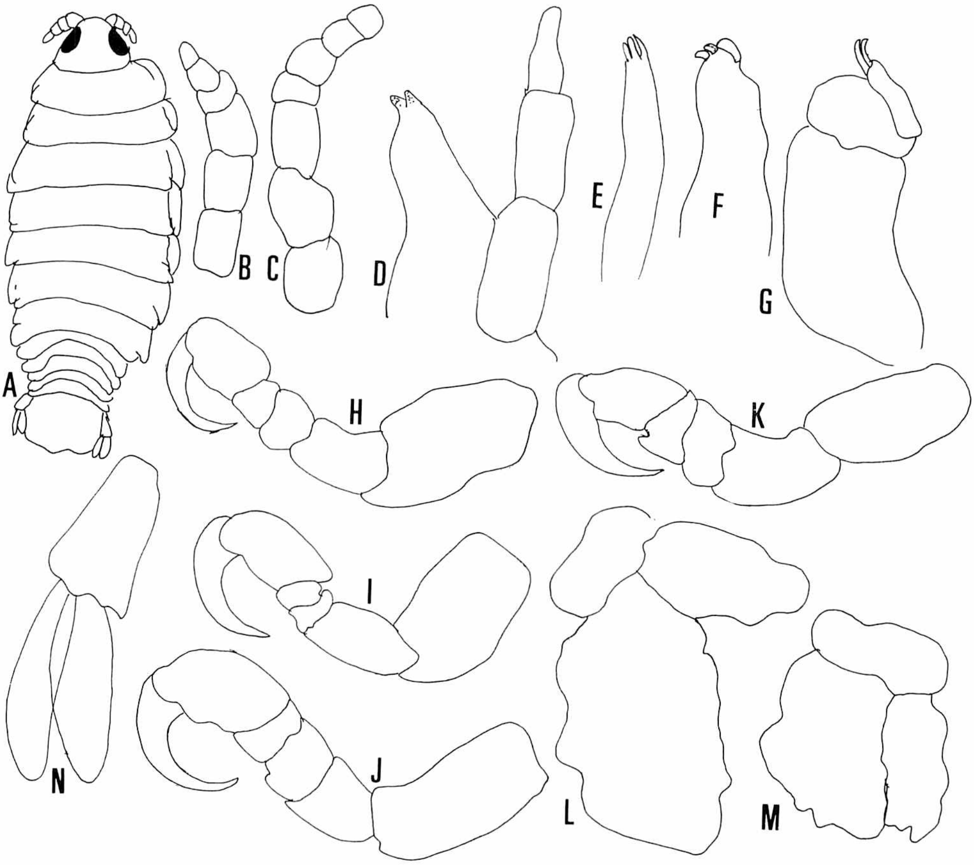

Fig.4. *Mothocya katoi* n. sp.
A. Dorsal view; B.First antenna; C.Second antenna; D.Mandible; E.First maxilla; F. Second maxilla; G.Maxilliped; H-J. Pereopods 1-3. K. Pereopod 5; L.Pleopod 1 ; M. Pleopod 2; N.Uropod.(All: Allotype male).

Pereopods(Fig. 4H and K) robust; pereopods 4 to 7 longer than those of 1 to 3; basis stout; ischium and merus rectangular; carpus short; propodus rather robust with margin; dactylus big and recurved.

Pleopods (Fig. 4L-M): both rami rectangular with sinuate margin.

Uropod (Fig. 4N) both rami rectangular.

Remarks: The present new species is most closely allied to *Mothocya melanosticta*. collected from the but the former is separated from the latter in the following features:(1) slenderer body shape, (2) blackish body colour, (3) less numerous spines on maxilla, and(4) shorter merus and carpus of pereopods.

Glossobius ogasawarensis **n. sp.**

(Japanese name: Tobiuono-e, new)

Fig.5 and 6

Material examined; 3♀♀(1♀ holotype, 37.2 mm in body length and 2♀♀ paratypes, 34.4～36,0 mm in body length) and 2♂♂(1♂ allotype, 13.2 mm in body length and 1♂ paratype, 13.0 mm in body length) from the mouth of the exocoetid fish, *Cypselurus angustceps* taken from the sae near Kitaiou-jima, 25° 26′ N, 141° 17′ E., coll. Kenji Kato, June 18, 1991.

Type seires is deposited as follows: holotype(TOYA Cr-11185), allotype(TOYA Cr-11186) and 2 paratypes(TOYA Cr-11187～11188) at the the Toyama Science Museum and a paratype (OMNH Ar-3844) at the Osaka Museum of Natural History.

Description of female. Body 3.0 times longer than wide, only weakly twisted to one side; convex margin not distorted. Eyes moderate in size; each eye with 80 ommatidea.

First antenna(Fig. 5C) 6-segmented; terminal segment not protruded.

Second antenna (Fig. 5D) 9-segmentd; fifth to terminal segments smaller than segments 1-4.

Mandible(Fig. 5E); pars inicisiva acute; palp 3-segmented, far beyond the apex. First maxilla(Fig. 5F) slender and 2-segmented; termnal margin with 4 spines. Second maxilla (Fig. 5G) stout with 13 spines at the tip and 2 at the apical margin. Maxilliped(Fig. 5H); basal segment very wide with more than setae around the margin. Second segment small. Third segment small with recurved spines.

Pereopod 1 (Fig. 5I); basis stout; ischium triangular; merus almost square; carpus short; propodus square; dactylus recurved. Pereopods 2～3.(Fig. 5J-K); basis rectangular; ischium and merus square; carpus short, less than half length of merus; propodus almost square; dactylus recurved but longer than that of pereopod 1. Pereopod 4(Fig. 5 0); basis very big and almost square; ischium also square; merus short and rectangular; carpus triangular; propdus rectnagular; dactylus recurved. Pereopods 4～7(Fig. 5 L-N); basis very big; ischium big and triangular; merus and carpus relatively short; propodus square; dactylus recurved.

Pleopod in female not characteristic.

Uropod(Fig. 5N); basis pentagonal; exopod lanceolate; endopod a little shorter than exopod.

Description of male: Male smaller than female. Body not twisted, 3.0 times as long as wide. Cephalon triangular with blunt anterior margin. Eyes mediocre in size, each eye with about 100 ommatidia.

First antenna (Fig. 6B) with 6 segments.

Second antenna (Fig. 6C) with 7 segments.

Maxilliped(Fig. 6E); basis rectanguler; second palpal segment round; terminal segment narrow with 5 teeth.

Pereopods (Fig. 6F-L);basis big and rectangular; ischium rectangular; merus and carpus

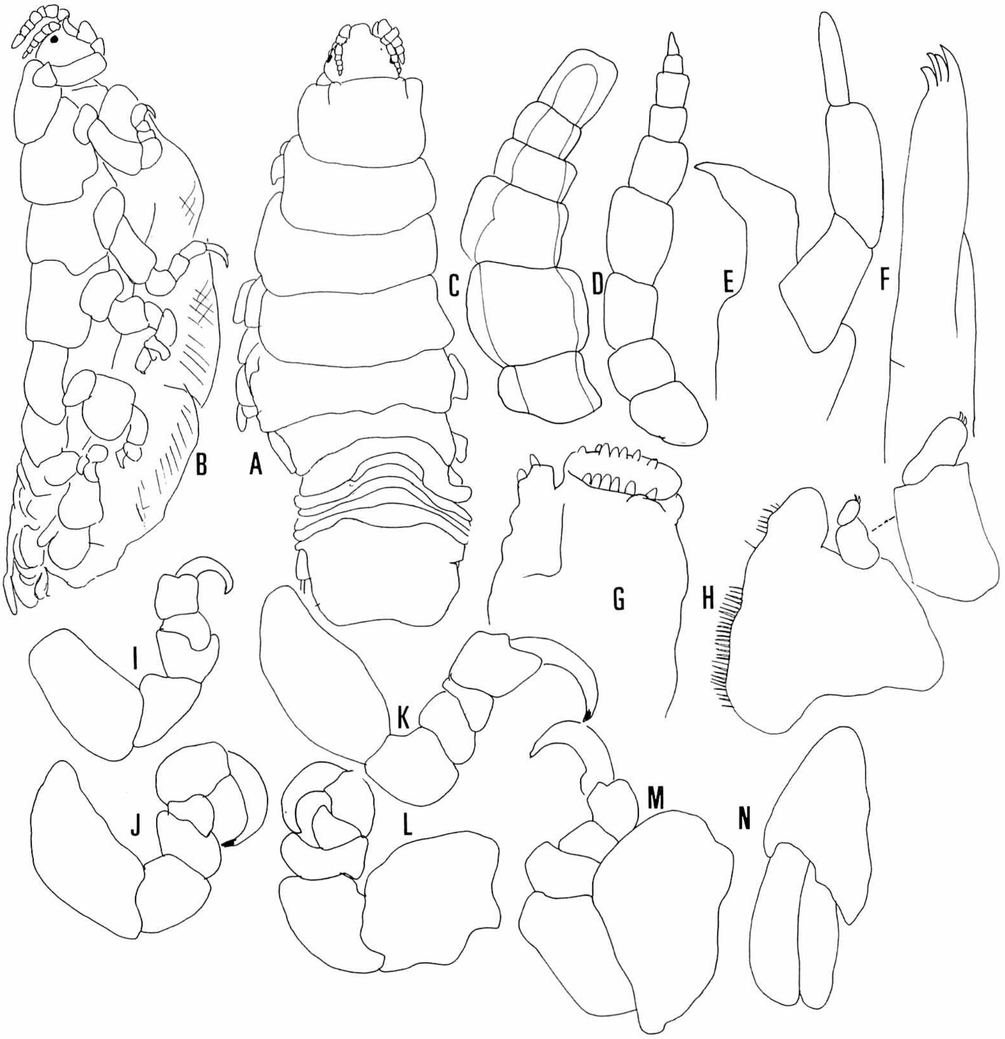

Fig.5. *Glossobius ogasawarensis* n. sp.
A. Dorsal view; B.Lateral view; C.First antenna;D.Second antenna; E.Mandible; F. First maxilla; G.Second maxilla; H.Maxilliped; I-M.Peraeopods 1-5.;N.Uropod.(All: Holotype female).

short; propodus stout; dactylus recurved and relatively short.

All the pleopod round and with sinuate margin.

Uropods; basis pentagonal; both rami lanceolate.

Remarks:The present new species is most closely related *Glossobius hemiramphi* collected from the mouth of *Hemiramphus brasiliensis* (Linnaeus), taken from Puerto Rico. But the former is separated from the latter in the followig features:(1) 6 segments in first antenna

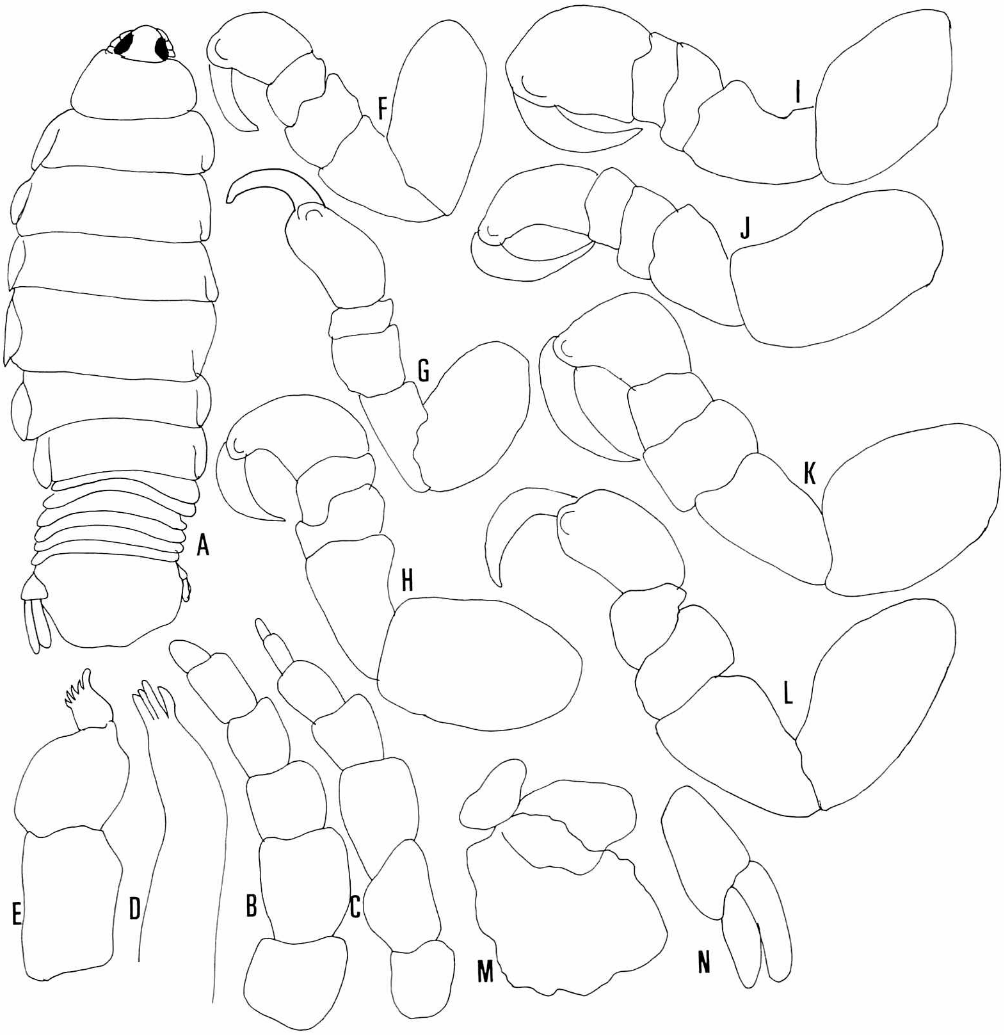

Fig.6. *Glossobius ogasawarensis* n. sp.
A.Dorsal view; B.First antenna; C.Second antenna; D.First maxilla;E.Maxilliped; F-L.Pereopods 1-7; M.Second pleopod; N.Uropod. (All: Allotype male).

in stead of 7 or 8 segments; (2) 9 segments in second antenna in stead of 7 or 8 segments ; (3) less prominent anterior tip of cephalon; (4)longer carpus on pereopods; (4)longer carpus on pereopod and (5) broader basis of pereopods 5-7.

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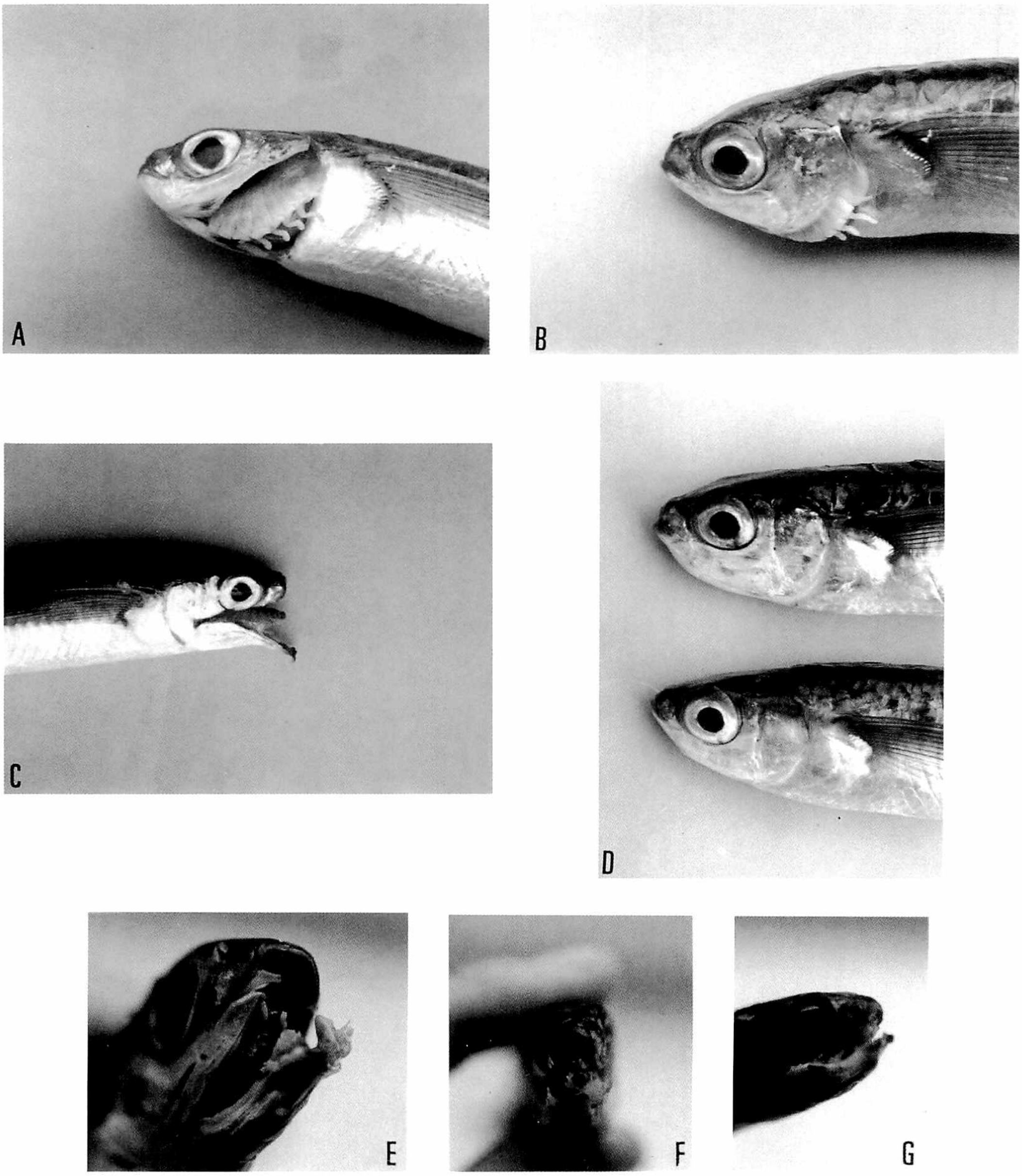

Plate

A and B. *Mothocya melanosticta* on the gill of *Parexocoetus brachypterus*
C. *Mothocya katoi* n. sp. in the *Parexocoetus brachypterus*; D.*Parexocoetus brachypterus* with *Mothocya katoi*(above), and normal fish (below); E-G. *Glossobius ogasawarensis* n. sp. in the mouth of *Cypselurus angusticeps* (A-D: taken by Mr.Kenji Kato)